

PATENT ABSTRACTS OF JAPAN

(11) Publication number : 64-042129

(43) Date of publication of application : 14. 02. 1989

(51) Int. Cl.

H01L 21/30

H01L 21/302

H01L 21/304

(21) Application number : 62-198075

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(22) Date of filing : 10. 08. 1987

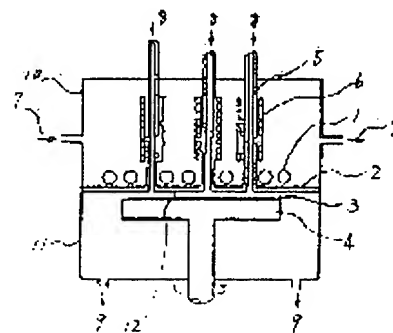
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(54) CLEANING AND REMOVAL OF ORGANIC SUBSTANCE

(57) Abstract:

PURPOSE: To remove an organic substance at high speed and uniformly without increasing a temperature of a substance to be processed by a method wherein oxygen gas containing ozone is heated in advance and then flows and more than a prescribed amount of oxygen gas containing ozone which is heated and supplied flows from two or more places to a narrow space on the surface of the substrate by using a partition plate composed of an ultraviolet transmitting material.

CONSTITUTION: A UV-rays radiating discharge lamp 1 is arranged on a face whose area is larger than an area of a substrate 3 to be processed; inside a lamphouse 10, e.g., nitrogen gas is introduced from an inlet port 7 and is discharged from an outlet part 7' ; a region around the lamp 1 is purged. Two or more quartz tubes 5 are arranged at a partition plate 2 composed of synthetic quartz; oxygen gas containing ozone is blown from inlet ports 8 onto the surface of the substrate 3 to be processed. The oxygen gas containing ozone is heated by using heaters 6 arranged around the quartz tubes 5. By this setup, an organic substance is removed at high speed and uniformly without increasing a temperature of the substrate to be processed so much; it is possible to prevent an impurity contained in the organic substance from being diffused into the substrate and a circuit.



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[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision
of rejection]

[Date of requesting appeal against examiner's
decision of rejection]

[Date of extinction of right]

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Process for the wet-chemical surface treatment of semiconductor chips:

Patent Number: EP0344764
Publication date: 1989-12-06
Inventor(s): GRATZL CHRISTA; LAMPERT INGOLF
Applicant(s): WACKER CHEMITRONIC (DE)
Requested Patent: ☐ EP0344764, A3, B1
Application Number: EP19890109886 19890601
Priority Number(s): DE19883818714 19880601
IPC Classification: H01L21/306
EC Classification: H01L21/306N2B, H01L21/306N4
Equivalents: ☐ DE3818714, ☐ JP2025030
Cited Documents: US4264374; US4605479; JP62173720; JP57154836

Abstract

According to the invention, the semiconductor wafers to be treated are placed in a system into which the water can be fed in the finely dispersed liquid state and the substances chemically active on the wafer surface in the gaseous state so that the agents which are actually chemically active are first formed in the system itself. This process makes possible cleaning processes with particularly low particle levels and is suitable, in particular, for process sequences made up of a plurality of substeps.

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